EXPRESS NH

New Hampshire Residential Energy Code Application for Certification of Compliance

A. Owner/Owner Builder:
(Company Name if applicable)

Name:

Mail Address:

City: | State: | Zip:

Phone:

E-Mail:

B. General Contractor (Company Name):

Name:

Mail Address:

City: | State: | Zip:

Phone:

E-Mail:

C. Proposed Structure:

Map Lot

Street:

City:

D. Official Use Only:

Date Received:

Approved by: **Date:**

Approval Number:

Stamp:

E. Type of Construction:

☐ New Residence ☐ Small Commercial

F. Type of Construction:

☐ New Construction
☐ Addition
☐ Renovation
☐ Sunroom
☐ Exempt

G. Structure is EXEMPT because:

☐ NH Modular Home Program
☐ On a historic register
☐ Contains no provision for fossil fuel heat.
☐ Mobile Home
☐ Greenhouse for agricultural use only
☐ Addition less than 150 ft^2
☐ Low energy use (less than 1 watt/ ft^2)

H. Additional Information:

Total Floor Area ft^2
(Heated Space)_____ ft^2

Heating System
AFUE %_____ %

Basement Heated? ☐ Yes ☐ No

☐ Full Basement
☐ Walk Out Basement
☐ Slab on Grade
☐ Other _____

Highest Window U Value **0.**_____

Window Type: ☐ Clear ☐ Low-e ☐ Low-e Argon

Fuel Type(s): ☐ Oil ☐ Gas ☐ Propane ☐ Electric ☐ Wood ☐ Other

Heating System Type: ☐ Hot Water ☐ Hot Air ☐ Stove ☐ Resistance ☐ Heat Pump

I. Who is Submitting this Application? (Application will be returned to person submitting unless otherwise stated.)

☐ Owner
☐ Designer
☐ Builder
☐ Other (explain)
☐ Architect

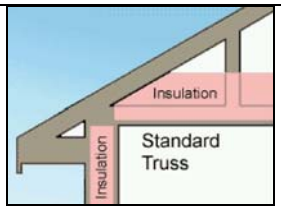
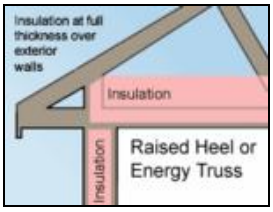
3/07

Signature_____ Print Name_____ Date_____

I hereby certify that all the information contained in this application is true and correct, and construction shall comply in all respects with the terms and specifications of the approval given by the Public Utilities Commission and with the New Hampshire Code for Energy Conservation in New Building Construction.

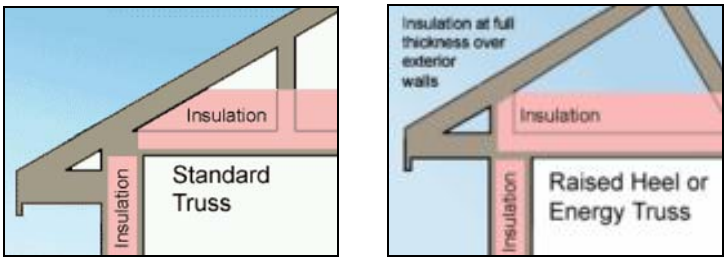
EXPRESS NH Energy Code Compliance

Directions: Complete the "Your Proposed Structure" columns. No measurements or calculations needed. If you meet the Express NH package requirements, you meet the NH Energy Code. Submit pages 1 and 2 only.

	PACKAGE REQUIREMENTS		YOUR PROPOSED STRUCTURE	
			Planned R or U Values	Brands / Models / insulation type and thickness
Window U Value (smaller U is better)	**U .35**			
Skylights	**U .60**			
Flat Ceiling R Value[i] OR Flat Ceiling with Raised/Energy Trusses	 **R-49** ----------  **R-38**			☐ By checking this box, I certify that this structure is being built with a raised / energy truss or that the full thickness of the ceiling insulation will be maintained over the plates.
Sloped or Cathedral Ceiling up to 500 Ft[ii]	**R-30**			
Above Grade Wall R Value[iii]	**Cavity insulation R-19** **Cavity + Continuous insulation R-15 + R-5**			
Mass Walls[iv]	**R-15**			
Floor R Value (Basement ceiling)	**R-30**			
Door U-Value	**U .35**			
Minimum Heating System AFUE	**85% - Oil** **90% - Gas**			
Basement Wall or Crawl Space	**Cavity insulation R-13 or continuous insulation R-10**			Insulate either **Floor** or **Basement Wall**
Slab[v]	**R-10 4 feet down**			

Submit your application to:
New Hampshire Public Utilities Commission
21 South Fruit Street, Suite 10, Concord NH 03301

[i] Ceilings with attic spaces: R-38 shall be deemed to satisfy the requirement for R-49 wherever the full height of uncompressed R-38 insulation extends over the wall top plate at the eaves. This is accomplished using a raised heel or energy truss as shown in the diagram below.



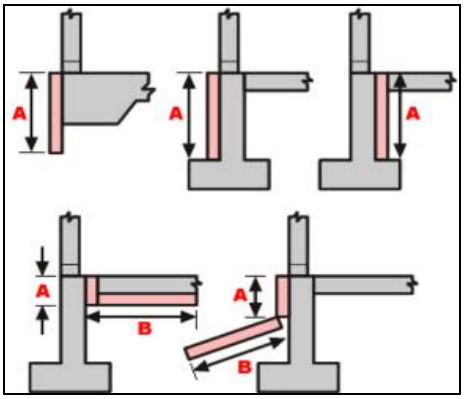
[ii] Ceilings without attic spaces: Where the design of the roof/ceiling assembly does not allow sufficient space for the required insulation, the minimum required insulation for such roof/ceiling assemblies shall be R-30. This reduction of insulation from the requirements shall be limited to 500 ft² of ceiling area

[iii] R-15 + R-5 means R-15 cavity insulation plus R-5 insulated sheathing. If structural sheathing covers 25 percent or less of the exterior, R-5 sheathing is not required where structural sheathing is used. If structural sheathing covers more than 25 percent of exterior, structural sheathing shall be supplemented with insulated sheathing of at least R-2

[iv] Mass walls shall be considered to be walls made of concrete block, concrete, insulated concrete form (ICF), masonry cavity, brick (other than brick veneer), earth (adobe, compressed earth block, rammed earth) and solid timber/logs. The provisions for mass walls shall be applicable when at least 50 percent of the required insulation R-value is on the exterior of, or integral to, the wall. Walls that do not meet this criterion for insulation placement shall meet the above grade (wood framed) wall insulation requirements.

[v] Slab edge insulation shall start at the top of the slab edge and extend four feet down. Insulation may go straight down, out at an angle away from the building, or over the slab edge and then under the slab. See diagram below.

Allowable Slab Insulation Configurations



A = Four Feet or A+ B = Four Feet

NEW HAMPSHIRE ENERGY CODE
Summary of Basic Requirements

Air Leakage	Joints, penetrations and all other similar openings in the building envelope that are sources of air leakage must be caulked, gasketed, weather-stripped or otherwise sealed. The maximum leakage rates for manufactured windows and doors are shown in the 'notes' section. Recessed lights must be type IC rated and installed with no penetrations or installed in appropriate air-tight assemblies with 0.5 in clearance from insulation.
Vapor Retarder	Vapor retarders must be installed on the warm-in-winter side of all non-vented framed ceilings, walls and floors. In floors, exterior rated sheathing qualifies as a vapor retarder. This requirement does not apply where moisture or its freezing will not damage building materials.
Materials and Insulation Information	Materials and equipment must be identified so that compliance can be determined. Manufacturer manuals for all installed heating, cooling and service water heating equipment must be provided. Insulation R-values, glazing and door U-values and heating and cooling equipment efficiency must be clearly marked on the building plans, drawings, specifications or Area Calculation Worksheet.
Pull Down Attic Stairs, Attic Hatch, and Knee Wall Doors **Full size Attic Entry Doors**	Should be insulated with a minimum 4" thick rigid foam cover and have box that is tightly sealed and weather-stripped. All doors leading from a conditioned space into an unconditioned walk-in attic or enclosed attic stairwell should be insulated and weather-stripped exterior rated door units.
Duct Insulation	Supply and return ducts for heating and cooling systems located in unconditioned spaces must be insulated to at least R-5 Exceptions: Insulation is not required for exhaust air ducts, ducts within HVAC equipment or when the design temperature difference between the air in the duct and the surrounding air is 15° F or less.

Duct Construction	Ducts must be sealed using mastic with fibrous backing tape. For fibrous ducts, pressure-sensitive tape may be used. Other sealants may be approved by the building official. Duct tape is not permitted. The HVAC system must provide a means for balancing air and water systems.
Temperature Controls	Where used to control comfort heating, thermostatic controls shall be capable of being set locally or remotely by adjustment or selection of sensors down to 55° F (13°C) or lower. Where used to control comfort cooling, thermostatic controls shall be capable of being set locally or remotely by adjustment or selection of sensors up to 85° (29°C) or higher. Where used to control both comfort heating and cooling, thermostatic controls shall be capable of providing a temperature range or deadband of at least 5° F (Δ3°C) within which the supply of heating and cooling energy is shut off or reduced to a minimum.
HVAC Piping Insulation	HVAC piping in unconditioned spaces conveying fluids at temperatures above 120°F or chilled fluids at less than 55°F must be insulated to R-4.
Heated Swimming Pools	All heated swimming pools must have an on/off pool heater switch. Heated pools require a pool cover unless more than 20% of the heating energy is from renewable sources. Any swimming pool pump must be equipped with a time clock.
Circulating and Non-Circulating Hot Water Systems	Circulating hot water systems must have automatic or manual controls and must be insulated. ALL DOMESTIC HOT WATER SYSTEMS flowing through unconditioned space shall be insulated to a minimum of R-3.
Electric System	Each multifamily dwelling unit must be equipped with a separate electric meter.